

Transportation Improvement Program FY 2017-2018-2019-2020



Bay City Area Transportation Study (BCATS) DRAFT REPORT

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Cover photographs: Center Ave under construction October 15, 2015 (left); Center Ave completed Project November 20, 2015 (right)

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Chapter 1 – TIP Development and Overview

The Transportation Improvement Program (TIP) is an integral part of the planning process for the Bay City Area Transportation Study (BCATS). According to the Federal Transportation Bill, *Fixing America's Surface Transportation Act (FAST Act) of 2015* and 23 USC 134(a) and (h)/FTA-Sec 8(a) and (h), a TIP must be developed for the Bay City metropolitan area by BCATS in cooperation with the State, transit operators, and local road implementing agencies. The TIP must be updated and approved at least every four years by BCATS and the Governor. It must include all projects to be funded under Title 23 and the Federal Transit Administration (FTA). This includes all federally funded highway, transit, and non-motorized transportation projects, as well as any regionally significant projects that are either federally funded or non-federally funded. There must be a reasonable opportunity for public comment prior to TIP approval. The TIP must cover a period of not less than 4 years and must include a priority list of projects to be carried out in the first 4 years. The TIP shall be financially constrained and include a financial plan that demonstrates how the projects can be implemented while the existing transportation system is being adequately operated and maintained. Only projects for which construction and operating funds can reasonably be expected to be available may be included. In developing the financial analysis, BCATS shall take into account all projects and strategies funded under Title 23, U.S.C., and the Federal Transit Act, other Federal funds, local sources, State assistance, and private contributions. The TIP must be consistent with the BCATS 2040 Metropolitan Transportation Plan and any future updates to the plan.

Implementing agencies in the BCATS area include: the Cities of Bay City and Essexville, the Bay County Road Commission (BCRC), the Bay Metropolitan Transportation Authority (BMTA) and the Michigan Department of Transportation (MDOT). MDOT is the implementing agency for all state highway projects. These agencies have representation on both the Policy and Technical Committees of BCATS. The Technical Committee reviews all project requests then forwards a recommended priority list of projects to the Policy Committee for final approval and placement in the TIP. All implementing agencies in the Bay City area have participated in the development of projects and priorities identified in the TIP. In addition, a map of the BCATS area is included on page five (5).

On May 12, 2012 the United States Environmental Protection Agency (EPA) revoked the 1997 8-hour 0.080 ppm Ozone standard for the purposes of regional transportation conformity. On May 21, 2012, the USEPA issued designations for the new 2008 8-hour 0.075 ppm Ozone standard. Bay County is designated attainment under the 2008 standard.

Effective July 21, 2013, (as a result of both the partial revocation of the 0.080 Ozone standard, and the designation of Bay County as attainment for the 0.075 standard), the Bay County attainment/maintenance area is no longer required to demonstrate regional transportation conformity of Long Range Plans or Transportation Improvement Plans (TIPs) until EPA publishes a notice designating the area in nonattainment.



Unless a designation to nonattainment for the 2008 standard occurs on or before July 20, 2013, the requirement to demonstrate regional transportation conformity will end until a designation of nonattainment under a National Ambient Air Quality Standard (NAAQS) is published for the area.

In addition, approval of the TIP shall be in accordance with the BCATS Participation Plan, which was originally adopted on October 23, 2014. The Participation Plan ensures consideration of Environmental Justice concepts. An Environmental Justice analysis of the TIP can be found in Chapter Four (4) of this document.

The BCATS implementing agencies have indicated that sufficient funds are available from the sources indicated to implement the projects listed in the TIP (i.e. non-Federal share will be available). Funds have been included in each agencies approved transportation budget. Furthermore, projects can be funded within available resources.

Project listings for fiscal years 2017, 2018, 2019 and 2020 are included in Appendix B.

Public Outreach

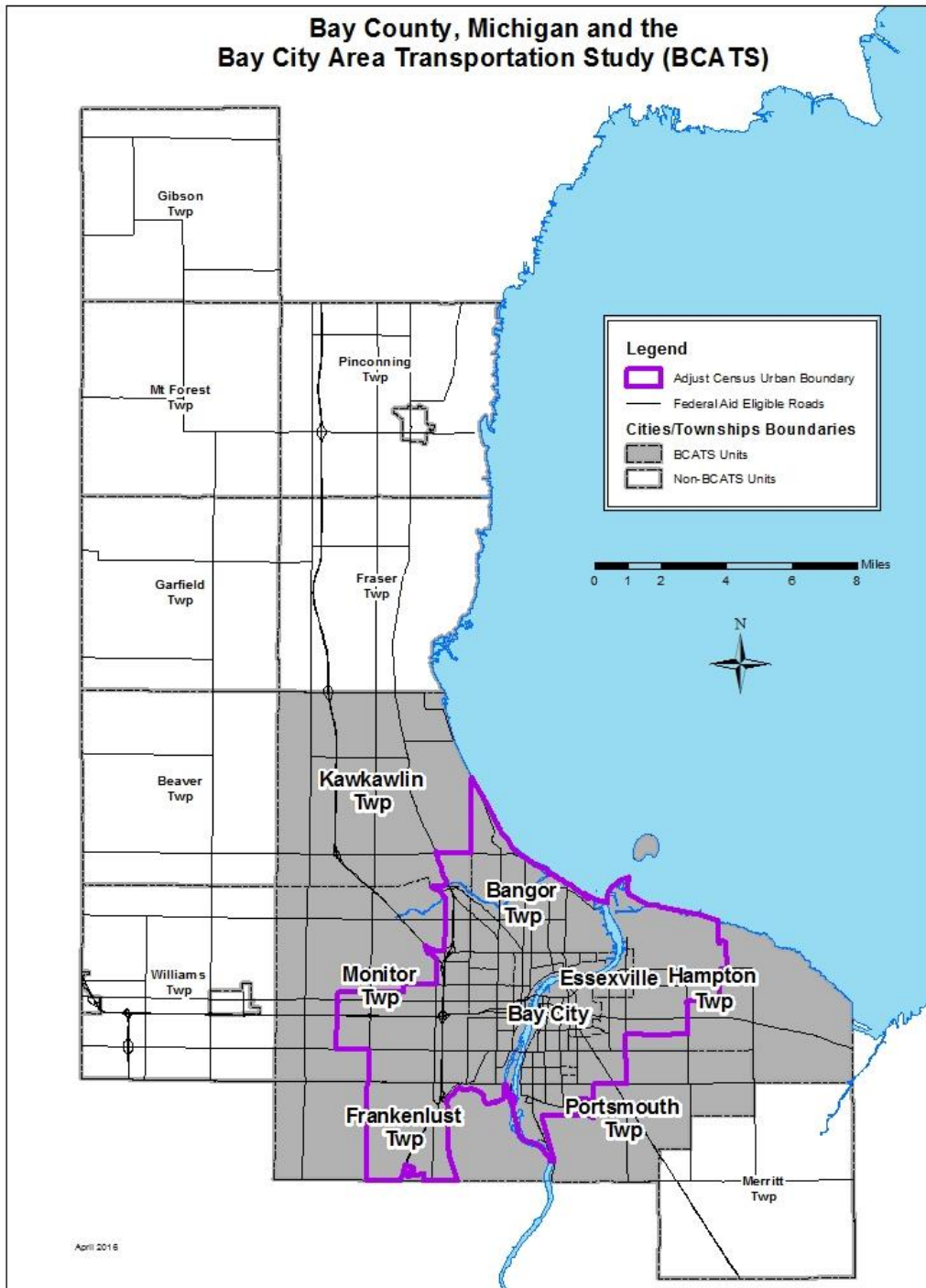
In accordance with the BCATS 2040 Metropolitan Transportation Plan and the Participation Plan, a Public Open House Meeting on the 2017-18-19-20 TIP was held on May 10, 2016, at 4:00 P.M to 7:00 P.M at the Alice and Jack Wirt Public Library, 500 Center Ave, Bay City MI, 48708.

To solicit public comments for the public meeting, BCATS sent letters to our consultation contact list used for our 2040 MTP and updated to reflect changes, informing the public of the projects in the 2017-18-19-20 TIP. A copy of this letter is included in Appendix A. Any comments received back were incorporated into the program as well as added in Appendix A. The goal of the outreach is to keep those contacts informed on the transportation improvement program and acquire additional feedback from those groups, organizations, and individuals who have concerns or questions regarding the program. As part of the updated Travel Demand Model for the 2040 Metropolitan Transportation Plan, BCATS met directly with the townships and cities and discussed the 2017-20 TIP and well as their specific local plans and programs. Over the development of the 2017-20 TIP, BCATS held these and numerous other discussions with city and township staff, and other community agencies regarding any of their local plans.

The previously mentioned list is available in Appendix A. BCATS also posted the TIP and associated maps and tables on the Bay County Transportation Planning Website at www.baycounty-mi.gov/transportation. Prior to adoption of the TIP, a public hearing will be held at the BCATS Policy Meeting on June 22, 2016 at 1:30 P.M. located at the Bay County Building, 515 Center Ave, Bay City MI, 48708.



BCATS Overview Map





Chapter 2 – Financial Plan for Bay City area TIP

Introduction

The Transportation Improvement Program (TIP) is the list of road and transit projects that communities and agencies plan to implement over a four-year period. That list is required to be fiscally constrained; that is, the cost of projects programmed in the TIP cannot exceed the amount of funding “reasonably expected to be available” during that time. The function of the TIP Financial Plan is to manage available federal-aid highway and transit resources in a cost-effective and efficient manner. Specifically the Financial Plan details:

- I. Available highway and transit funding (federal, state, and local);
- II. Fiscal constraint (cost of projects cannot exceed revenues reasonably expect to be available);
- III. Expected rate of change in available funding (unrelated to inflation);
- IV. Year of Expenditure (YOE) factor to adjust for predicted inflation;
- V. Estimate of Operations and Maintenance (O and M) costs for the federal-aid highway system (FAHS).

Part I: Available Highway and Transit Funding

The majority of federal highway and transit funding is derived from federal motor fuel taxes, currently 18.4 cents per gallon on gasoline and 24.4 cents per gallon on diesel. These funds are deposited in the Highway Trust Fund (HTF). A portion of these funds is retained in the Mass Transit Account of the HTF for distribution to public transit agencies and states. In recent years, the HTF has seen large infusions of cash from the federal General Fund, due to declining collections from motor fuel taxes. This is mostly due to increased fuel efficiency in conventionally-powered vehicles, as well as a growing number of hybrid and fully-electric vehicles that require little to no motor fuel.

There are a number of federal highway programs serving different purposes. Appendix C contains a list of these programs. Federal highway funds are apportioned to the states (apportionment means distribution of funds according to formulas established by law) and then a portion is allocated to local agencies based on the population in each region. Local agencies within the BCATS Planning Area receive approximately \$1 million in federal-aid highway funding each year. In addition, MDOT spends approximately \$11 million annually for capital needs on state-owned highways in the region (I-, US-, and M- roads).

Like the highway programs, there are a number of federal transit programs, the list of which can also be found in Appendix C. Transit funds are distributed according to a complex set of distribution formulas. BMTA receives approximately \$2.4 million in federal-aid transit funding each year.



State funding for transportation comes from vehicle registration fees and motor fuel taxes. Currently, state motor fuel taxes are set at 19 cents per gallon on gasoline and 15 cents per gallon on diesel. The state also levies a six percent sales tax on the wholesale and federal tax portion of each gallon of motor fuel. Virtually none of this sales tax revenue goes to transportation. Funding from motor fuel taxes and registration fees (but not the sales tax) is deposited in the Michigan Transportation Fund (MTF), which is analogous to the federal HTF. The current gross receipts to the MTF are approximately \$1.95 billion annually. The Comprehensive Transportation Fund (CTF) within the MTF is used for transit. Currently, a little under \$167 million is deposited by the state into the CTF each year. MTF funding, after set-asides, is distributed to the State Trunkline fund (I-, US-, and M-designated roads) and to counties, cities, and villages throughout the state.

A series of laws enacted in November 2015 increased state funding for transportation. The Michigan House Fiscal Agency estimates that, starting in FY 2016, an additional \$455 million will be raised, increasing each year until 2020, when it's expected that the increase will stabilize at an additional \$1.2 billion per year.¹

Local funding is much more difficult to predict. There is a patchwork of transportation millages, special assessment districts, downtown development authorities, and other funding mechanisms throughout the BCATS Planning Area. Therefore, this Financial Plan does not attempt to quantify current non-federal funding or forecast future non-federal funding revenues, except for MTF and CTF.

Part II: Fiscal Constraint

The most important financial consideration when creating and/or maintaining a S/TIP is fiscal constraint. This means that each year's list of projects cannot exceed the amount of funding reasonably expected to be available in the fiscal year. Funding is considered "reasonably expected to be available" if the federal, state, and local funding amounts are based on amounts received in past years, with rates of change developed cooperatively between MDOT, transportation planning agencies, and public transportation agencies. Note that these rates of change not the same as inflation; rather, they are forecasts of the amount of funding that will be made available by the federal, state, and local governments. In Michigan, this cooperative process is facilitated by the Michigan Transportation Planning Association (MTPA), whose members include the aforementioned agencies, plus the Federal Highway Administration (FHWA) and FTA. The MTPA has determined that recent federal transportation funding shortfalls make it prudent to hold federal funding levels at a two percent annual rate of increase for all four years for the FY 2017-2020 TIP (see Appendix D).

Year of Expenditure (YOE)

When MDOT, BCRC, City of Bay City, City of Essexville, and BMTA program their projects, they are expected to adjust costs using year of expenditure (YOE) dollars. YOE simply means

¹ Hamilton, William E., Jim Stansell, and Kyle I. Jen. "Road Funding Package-Enacted Analysis." Lansing, MI House Fiscal Agency, November 2015.



that project costs have been adjusted for expected inflation. This is not the same as expected rates of funding change (see previous section). Each agency has its own inflation factor(s), based on past experience. However, MDOT has developed YOE factors for itself and any agency that hasn't developed its own. For the upcoming FY 2017-2020 TIP cycle, they are five percent for FY 2017 and FY 2018, 4.5 percent for FY 2019, and four percent for FY 2020. See Appendix D for more details.

Summary: Resources Available for Capital Needs on the Federal-Aid Highway System

Table 1 contains a summary of the predicted resources that will be available for capital needs on the federal-aid highway system in the BCATS Planning Area over fiscal years 2017 through 2020. The only local (i.e., non-federal) funding included is funding required to match federal-aid funds. This is usually about 20 percent of the cost of each project.

Table 1. Forecast of Resources Available for Capital Needs on the Federal-Aid Highway System in the BCATS Planning Area (Millions of Dollars)

2017	2018	2019	2020	Total
\$12.57	\$3.17	\$39.89	\$54.13	\$109.76

Part III: Estimate of Operations and Maintenance Costs for the Federal-Aid Highway System

Almost all federal-aid highway funding is restricted to capital costs; i.e., the cost to build and maintain the actual physical assets of the federal-aid highway system (essentially, all I-, US-, and M- designated roads, plus most public roads functionally classified as "collector" or higher). Operations and maintenance (O and M) costs, such as snow and ice removal, pothole patching, rubbish removal, electricity costs to operate streetlights and traffic signals, etc. are the responsibility of MDOT or local road agencies, depending on road ownership. Nevertheless, federal regulations require an estimate of O and M costs on the federal-aid highway system over the years covered by the TIP. Appendix D explains the method and assumptions used to formulate the estimate. Table 2. Contains a summary O and M cost estimate for roads on the federal-aid highway system in the BCATS Planning Area. These funds are not shown in the TIP, because most highway operations and maintenance costs are not eligible for federal-aid. The amounts shown are increased by the agreed-upon estimated YOE (i.e., inflation) factors (see Appendix D for a discussion of YOE adjustments).

Table 2. Forecast of Operations and Maintenance Costs on the Federal-Aid Highway System in the BCATS Planning Area (Millions of Dollars)

2017	2018	2019	2020	Total
\$5.23	\$5.30	\$5.36	\$5.42	\$21.31



Part IV: Summary – Resources Available for Capital Needs of Public Transit Agencies

Transit agencies receive their funding from a variety of sources: federal, state, and local. Federal funding is distributed, in large part, according to the population of the urbanized area and/or state. For example Section 5307 (Urbanized Area Formula Grant) is distributed directly to large transit agencies located within Ann Arbor, Detroit, and Toledo Transportation Management Areas (TMAs; urbanized areas with more than 200,000 residents). Section 5307 funds are distributed to federally-specified transit agencies in urbanized areas between 100,000 and 199,999 residents. For areas under 100,000 population, the state can generally award funding at its discretion.

Other sources of funding are more specialized, such as Section 5310 (Transportation for Elderly and Persons with Disabilities) and Section 5311 (for rural areas). See Appendix C for more information on federal transit resources.

The State of Michigan, through the MDOT Office of Passenger Transportation (OPT), also distributes CTF funding to match federal-aid, for job access reverse commute (providing access to available employment for persons in low-income areas), and for local bus operating (LBO). LBO funds are very important to the agencies as federal-aid funding for transit, like federal aid funding for highways, is almost entirely for capital expenses.

Local funding can come from farebox revenues, a community's general fund, millages, and other sources. As with local highway funding, local transit funding can be difficult to predict. Therefore, this chapter will only include federal and state resources available for transit.

Table 3 contains a summary of the predicted resources that will be available for capital needs (and some operation needs, depending on the program) for BMTA during fiscal years 2017 through 2020. Federal funding reasonable expected to be available is included. CTF funding expected to be distributed by the MDOT Office of Passenger Transportation to BMTA is also included.

Table 3. Forecast of Resources Available for Public Transit Capital Needs in the BCATS Planning Area (Millions of Dollars)

2017	2018	2019	2020	Total
\$0.23	\$0.18	\$0.16	\$0.16	\$0.73

Part V: Demonstration of Financial Constraint, FY 2017 through FY 2020

After determination of resources available for federal-aid highway and transit capital needs in the BCATS Planning Area from FY 2017 through FY 2020, and matching those available resources to specific needs, a four-year program of projects is created within the context of the region's transportation policies as contained in the 2040 BCATS Long Range Plan. The list must be



adjusted to each year's YOY factor and then fiscally constrained to available revenues (see Appendix D). Table 4 contains a summary of the cost of highway and transit projects programmed over the four-year TIP period, matched to revenues available in that same period. This table shows that FY 2017 through FY 2020 TIP is fiscally constrained. Note: Operations and maintenance costs of the federal-aid highway system are included in the text of this chapter. However, these costs are not included in the TIP itself, as nearly all highway operations and maintenance costs are ineligible for federal-aid funding.

Table 4. Demonstration of Fiscal Constraint, FY 2017 through FY 2020 TIP (millions of dollars)

	2017	2018	2019	2020
Highway Funding	\$12.57	\$3.17	\$39.89	\$54.13
Highway Programmed	\$12.57	\$3.17	\$39.89	\$54.13
Transit Funding	\$0.23	\$0.18	\$0.16	\$0.16
Transit Programmed	\$0.23	\$0.18	\$0.16	\$0.16
Total Funding	\$12.80	\$3.35	\$40.05	\$54.29
Total Programmed	\$12.80	\$3.35	\$40.05	\$54.29
Difference	\$0	\$0	\$0	\$0



Chapter 3 – Transportation Projects

For projects to be included in the TIP, BCATS sends out a “Call for Projects” to the implementing agencies. Those transportation projects received are brought forward to the BCATS Technical Committee for review at a meeting open to the public where input is sought. The Technical Committee then prioritizes the projects based on how each project will enhance the entire system in the BCATS region based on condition of adjacent roads, traffic volumes, truck routes, and overall benefit to the roadway system and users in general. During this review the amount of available funds by the implementing agencies available for transportation projects is taken into account. The prioritization process has worked well in the past as it balances the implementing agencies ability to budget for the local match requirement, and yet focuses on the best projects for the system as a whole. The Technical Committee then recommends to the Policy Committee the prioritized projects for inclusion in the TIP. The full Policy Committee then votes on the recommended projects after review of all comments and suggestions, including a public comment period at each BCATS Policy Committee meeting.

Completed FY 2014-2015-2016-2017 TIP Projects

During the life of the FY 2014-2015-2016-2017 TIP, the BCATS implementing agencies completed several major projects.

In FY 2014 TIP, those include:

- City of Essexville – Resurfacing of Woodside Ave from Scheurmann St to Pine St.
- City of Bay City – Reconstruction of Saginaw St from 6th St to 10th St.
- BCRC – Bridge preventative maintenance on Mackinaw Rd over the Kawkawlin River.
- MDOT – Resurfacing M-25 (Center Rd) from Pine Rd to county line.
- MDOT – Electrical work on Veteran’s Memorial Bridge (M-25) over the Saginaw River.

In FY 2015 TIP, those include:

- City of Bay City – Mill and resurfacing of Center Ave from Water St to Madison Ave.
- City of Bay City – Construction of Bay City Riverwalk along eastside of Saginaw River.
- BCRC – Resurfacing of Salzburg Rd between 4 Mile Rd and Mackinaw Rd.
- MDOT – Bridge replacement of US-10 Bridge over I-75.

In FY 2016 TIP, those include:

- City of Bay City – Reconstruction of Madison Ave from Columbus Ave to McKinley St.
- City of Bay City – Mill and resurfacing of Midland St/Vermont St from Wenona Ave to Dean St.
- City of Bay City – Preventative Maintenance on Harry S Truman Pkwy (Independence) Bridge.



- BCRC – Preventative Maintenance on Seven Mile Rd Bridge over Kawkawlin River.
- BCRC – Bridge replacement on Midland Rd over Culver Creek.
- MDOT – Electrical work on M-25 (Veteran’s Memorial) Bridge.
- MDOT – Painting and repairs for 2 bridges over the M-13 Connector.

Delayed Transportation Projects

Originally listed in the FY 2014-2015-2016-2017 TIP for FY 2017, the M-13 (River Rd) mill and two course HMA overlay from the Zilwaukee Bridge to Bay City was delayed and projected to begin in FY 2024.

FAST Act Performance Measures

The FAST Act requires BCATS to establish performance targets that reflect national performance goals and measures. The National Performance goals as established in MAP-21 and now the FAST Act are as follows:

1. **Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure Condition** - To maintain the highway infrastructure asset system in a state of good repair.
3. **Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System.
4. **System Reliability** - To improve the efficiency of the surface transportation system
5. **Freight Movement and Economic Vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental Sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced Project Delivery Delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

These measures must be coordinated with MDOT and transit providers. They must be set by BCATS within 180 days of the MDOT’s or transit agency’s establishment of performance targets. As these targets have not yet been established by MDOT as of the writing of this TIP, no specific performance targets are identified at this time. As targets are identified in the future, they will be incorporated in the next developed TIP and implemented as required by law.



Amendments & Administrative Changes

It is important to remember what constitutes an amendment and what represents an administrative change because each has a different process and approval procedures. The table below provides guidance to assist local agencies in determining whether an amendment is needed for a project or if an administrative change is sufficient.

Amendments Include:	Administrative Changes Include:
1. Adding new project(s). New projects include projects previously deleted from the TIP and then resubmitted at a later time for inclusion in the TIP.	1. Carrying a project from one approved TIP to the next as long as it is not a major capacity project and the carrying forward is done in the first quarter of the first year of the new TIP.
2. Deleting projects	2. A minor change in scope of work (generally, anything not mentioned in the "Amendment" column is considered minor).
3. Extending the length of a previously approved project one-half mile or greater. This is considered a major change in scope of work.	3. Cost increases of 10 percent or less without a major change to scope of work AND without over programming the TIP.
4. Adding a travel or turn lane one-half mile or greater to a previously approved project. This is considered a major change in scope.	4. Changing the source of federal aid within the same federal agency.
5. Adding a new project phase to a previously approved project. This is considered a major change in scope.	5. Changing the order of approved projects by year within the TIP.
6. Adding federal funds to a previously non-federally funded project.	6. Changing a federally funded project to advance construct. The project must be shown in both the advance construct and payback years.
7. Cost increases by more than 25 percent with or without a major change in scope of work.	7. Moving a project from the Illustrative List to the TIP should a cost savings occur or additional funding become available.



2017-2018-2019-2020 TIP Project Locations

Bay City Area Transportation Study (BCATS)

2017-18-19-20 Transportation Improvement Program

Road and Bridge Project Locations

Prepared By: County of Bay
Dep. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave
Bay City, MI 49708
April 2016



0 0.5 1 2 3 4 Miles





Chapter 4 – Environmental Justice

Environmental Justice

In April 1997 the U.S. Department of Transportation (DOT) issued the DOT order on environmental justice to address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2). The order generally describes the process for incorporating environmental justice principles into all DOT programs, policies, and activities.

Environmental justice is an important part of the planning process and must be considered in all phases of planning. This includes all public participation plans and activities, the development of Regional Transportation Plans and Transportation Improvement Programs adopted by BCATS. Specifically, BCATS will consider environmental justice concerns within their established public involvement procedures.

There are three fundamental concepts of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

BCATS has identified census block groups where a high percentage of low-income and minority populations live so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed. BCATS updated its public Participation Plan in 2014 to eliminate barriers and engage minority and low-income populations in transportation decision making.

However, BCATS cannot fully meet community needs without the active participation of well-informed, empowered individuals; community groups; and other non-governmental organizations. These individuals and groups advance the letter, spirit, and intent of environmental justice in transportation when they are involved in public participation activities (meetings, hearings, advisory groups) to help BCATS understand community needs, perceptions, and goals. Our basic message to all citizens is that the earlier you get involved, the better your chances will be to create the impact you desire. There are many situations where public participation has influenced transportation decisions made in our community.

Transportation programs and projects cannot proceed without citizen acceptance and support that comes through an educated public and an open inclusive process.



BCATS has worked with the following groups for environmental justice purposes: the five Citizen District Councils, the Hispanic Community Agency, the NAACP Bay City branch, the Saginaw Chippewa Indian Tribe, the Bay City Housing Commission (low income) and the Division on Aging. Of particular note, the City of Bay City and the Chippewa Tribe have cooperated on past projects by agreeing on an official protocol for the handling and disposition of human remains. BCATS has contacted the five Citizen District Councils to solicit input into the transportation planning process. BCATS has notified the local president of the NAACP regarding the TIP and Metropolitan Transportation Plan. TIP project and meeting information is posted on the BCATS website <http://www.baycounty-mi.gov/transportation> as well as being published in the local newspaper, Bay City Times, and in and around the Bay County Building. BCATS will host a Public Open House Meeting to present the TIP to the public and solicit comments on Tuesday, May 10, 2016 from 4 p.m. to 7 p.m. at the Bay City Alice and Jack Wirt Library, 500 Center Ave, Bay City, MI 48708. BCATS will continue the ongoing development of strategies to ensure cooperation between the MPO and community organizations representing low-income populations and minority populations.

Definition of “Minority” for Purposes of Environmental Justice

According to the U.S. DOT Order 5610.2 the following groups are defined as “minority”:

1. Black (a person having origins in any of the black racial groups of Africa).
2. Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).
3. Asian American (a person having origins in any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands).
4. American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).
5. Native Hawaiian and Other Pacific Islanders (a person having origins in any of the original people of Hawaii, Guam, Samoa, or other Pacific Islands).

Definition of “Low-income” for Purposes of Environmental Justice

“Low-Income” is defined as a person whose household income is at or below the Department of Health and Human Services (HHS) poverty guidelines. HHS poverty guidelines are used as eligibility criteria for the Community Services Block Grant Program and a number of other federal programs. However, a state or locality may adopt a higher threshold for low-income, as long as the higher threshold is not selectively implemented and is inclusive of all persons at or below the HHS poverty guidelines.



Development and Analysis

BCATS has developed a demographic profile of the transportation planning area that includes identification of the locations of minority populations and low-income populations as covered by the executive order on environmental justice.

The maps, beginning on page 19, identify the minority populations and low-income populations within the BCATS. The maps identify minority and low-income areas in relation to the FY-2017-18-19-2020 proposed TIP projects, in order to provide a visual analysis of potential impacts.

Of the 20 total street and highway projects in the TIP, five (5) projects are located within or adjacent to census tracts identified as having a total minority percentage higher than the overall BCATS average for all census tracts. For each identified minority population, five (5) projects are located within or adjacent to African American minority areas, nine (9) projects are located within or adjacent to Asian minority areas, 12 projects are within or adjacent to Native American minority areas, and four (4) projects are within or adjacent to Hispanic minority areas. In addition, 6 of the 20 projects are within or adjacent to block groups which have been identified to have a low-income population higher than the overall BCATS average for all block groups.

Overall, 17 of the 17 of the street and highway projects are completely preservation and maintenance in nature. These projects do not include any relocations and displacements.

During the planning process, all projects will have an opportunity for public comment and participation. For major projects in the TIP, open houses will be conducted by the implementing agencies. These project open houses are held to discuss the socio-economic impacts of the project on the community which includes any low-income populations or minority populations. Mailing lists are compiled and invitations sent to everyone in the affected neighborhood. Also, during construction, appropriate detour routes are developed to minimize delay and disruption on all population groups. Having followed the adopted environmental justice practices BCATS has not identified any disproportionate adverse effects on minority and low-income populations.

There are also 35 transit projects identified in the TIP. The service area of the BMTA is the entire County of Bay which encompasses all of BCATS. BMTA promotes equality within their transportation programs. For example, BMTA supplies transit service to everyone, regardless of where they live, if they own a vehicle or not. BMTA has discounted fares for the elderly, the disabled and students populations. Outside of vehicle replacement purchases and operating costs, all projects are for improvements at the central passenger station or the main administrative building. These 35 projects benefit all identified minority populations and low-income populations.



This TIP was adopted according to the BCATS Participation Plan, which ensures that the decision-making process was open and fair and there was no denial or delay of benefits to minority and low-income populations. It should be noted that the Participation Plan was adopted on October 23, 2014.

BCATS will continue to address environmental justice issues over the life of the TIP. Coordination with MDOT with assistance and guidance provided by FHWA will help to refine and expand on our efforts.

DRAFT



Project Overview Map / Total Minority

Bay City Area Transportation Study (BCATS)

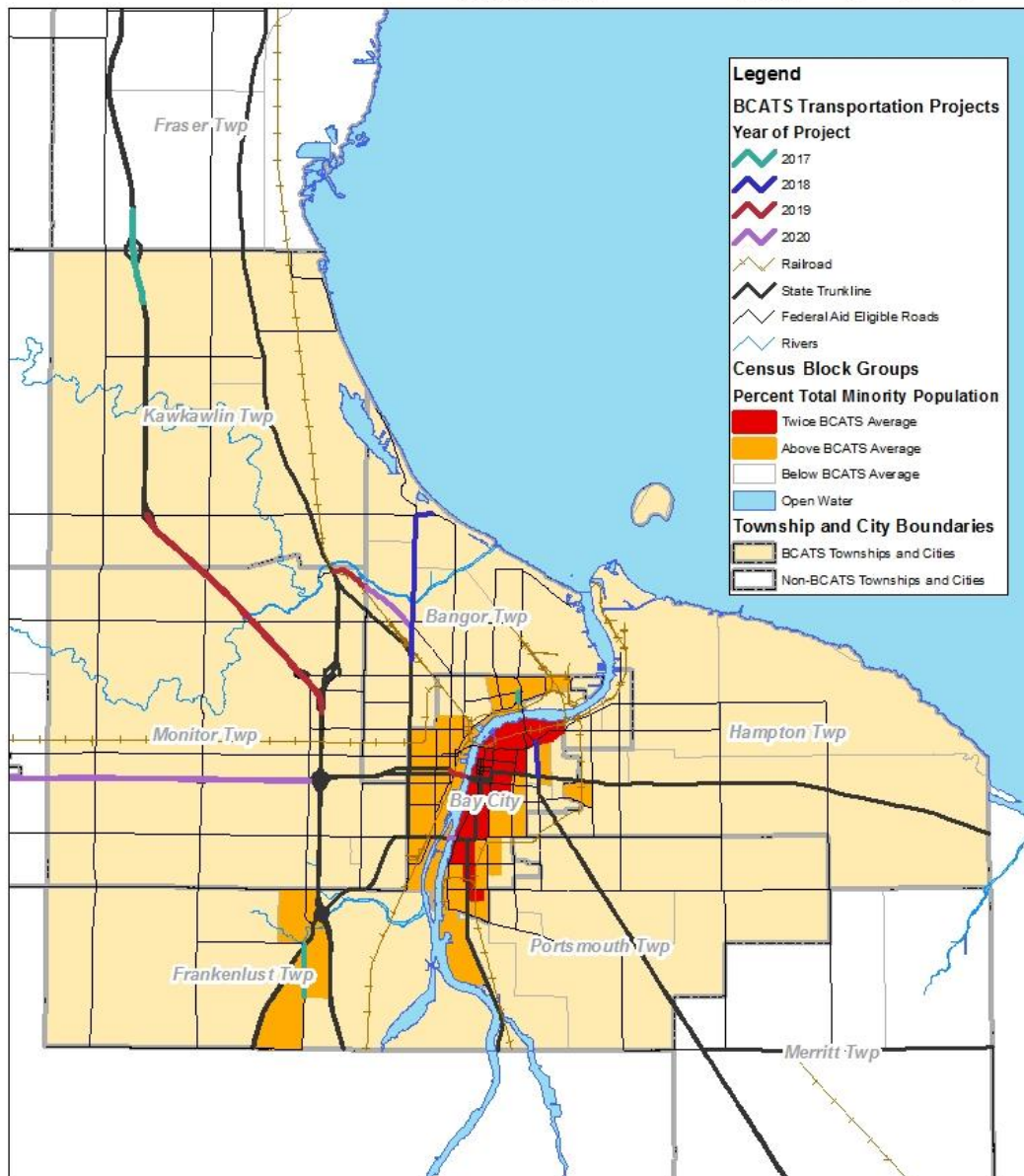
2017-18-19-20 Transportation Improvement Program

Prepared By: County of Bay
Dept. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave
Bay City, MI 49708
April 2016

Identification of Total Minority Areas for
Environmental Justice Analysis
Census Block Groups containing Total Minority Populations
above the BCATS Area average of 10.05%
2010 Census Data



0 0.5 1 2 3 4 Miles





Project Overview Map / African American Minority

Bay City Area Transportation Study (BCATS)

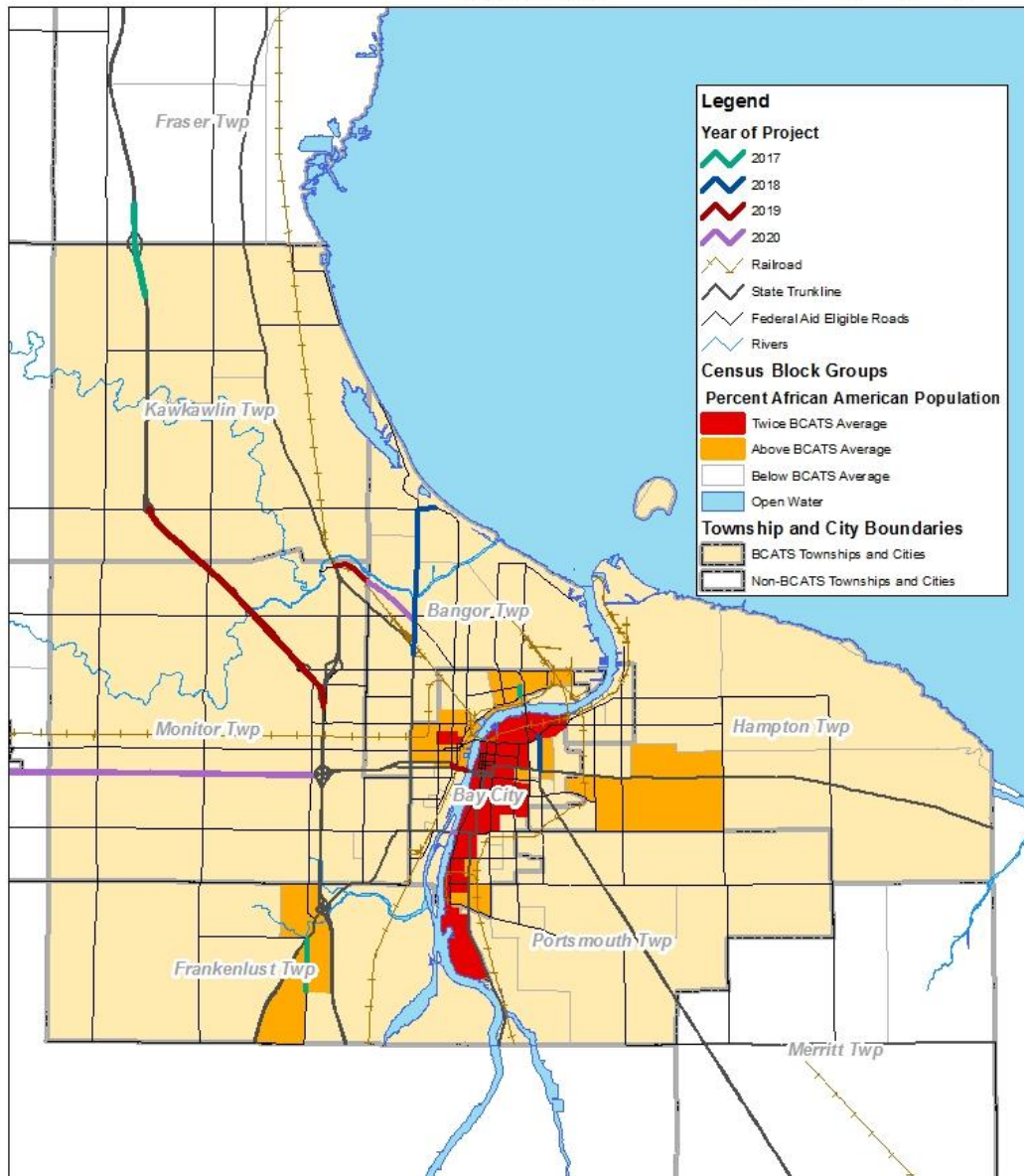
2017-18-19-20 Transportation Improvement Program

Prepared By: County of Bay
Dept. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave
Bay City, MI 49708
April 2016

Identification of African American Minority Areas for
Environmental Justice Analysis
Census Block Groups containing African American Populations
above the BCATS Area average of 1.93%
2010 Census Data



0 0.5 1 2 3 4 Miles





Project Overview Map / Native American Minority

Bay City Area Transportation Study (BCATS)

2017-18-19-20 Transportation Improvement Program

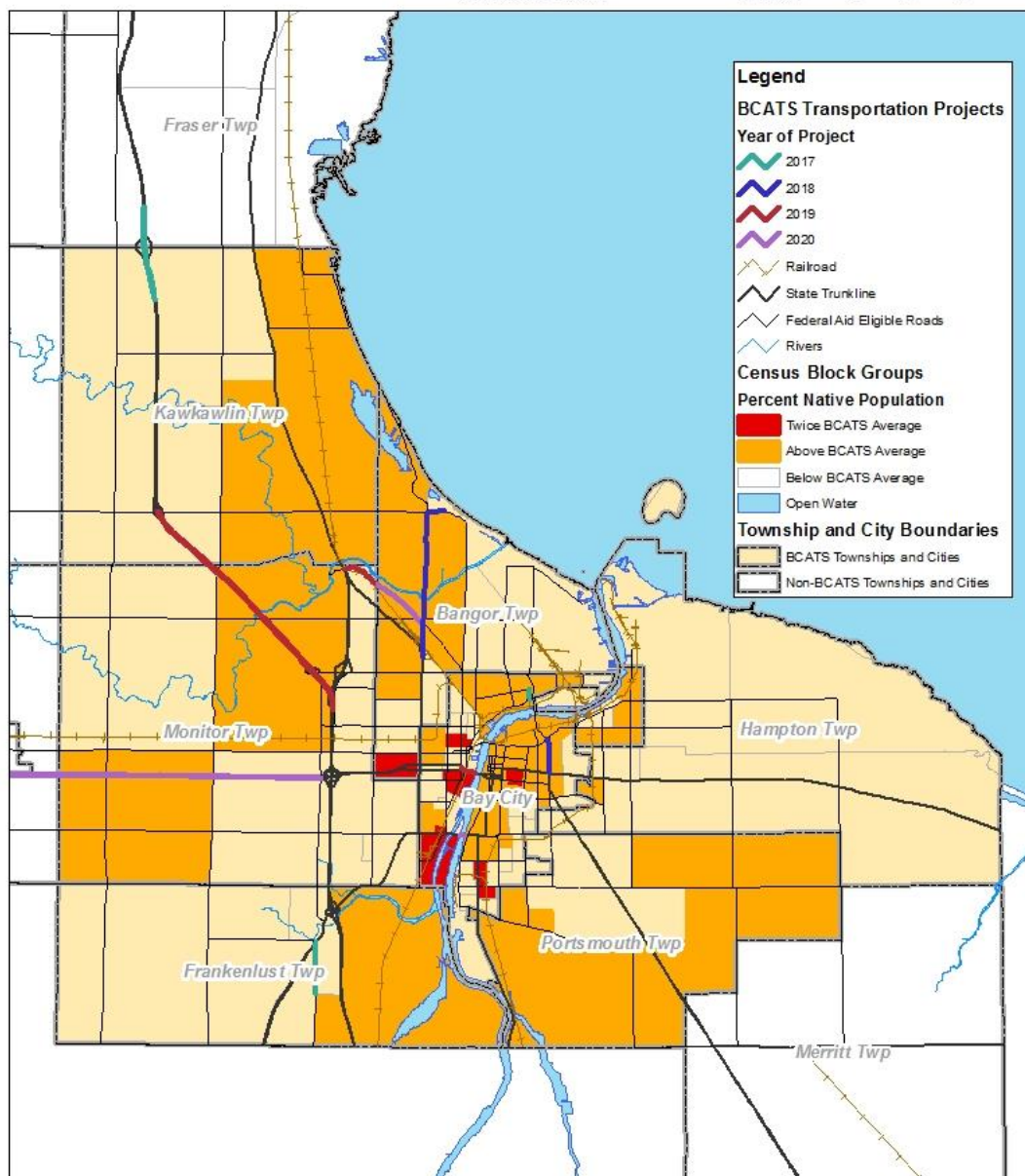
Prepared By: County of Bay
Div. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave.
Bay City, MI 49708

April 2016

Identification of Native American Minority Areas for
Environmental Justice Analysis
Census Block Groups containing Native American Populations
above the BCATS Area average of 0.53%
2010 Census Data



0 0.5 1 2 3 4 Miles





Project Overview Map / Asian American Minority

Bay City Area Transportation Study (BCATS)

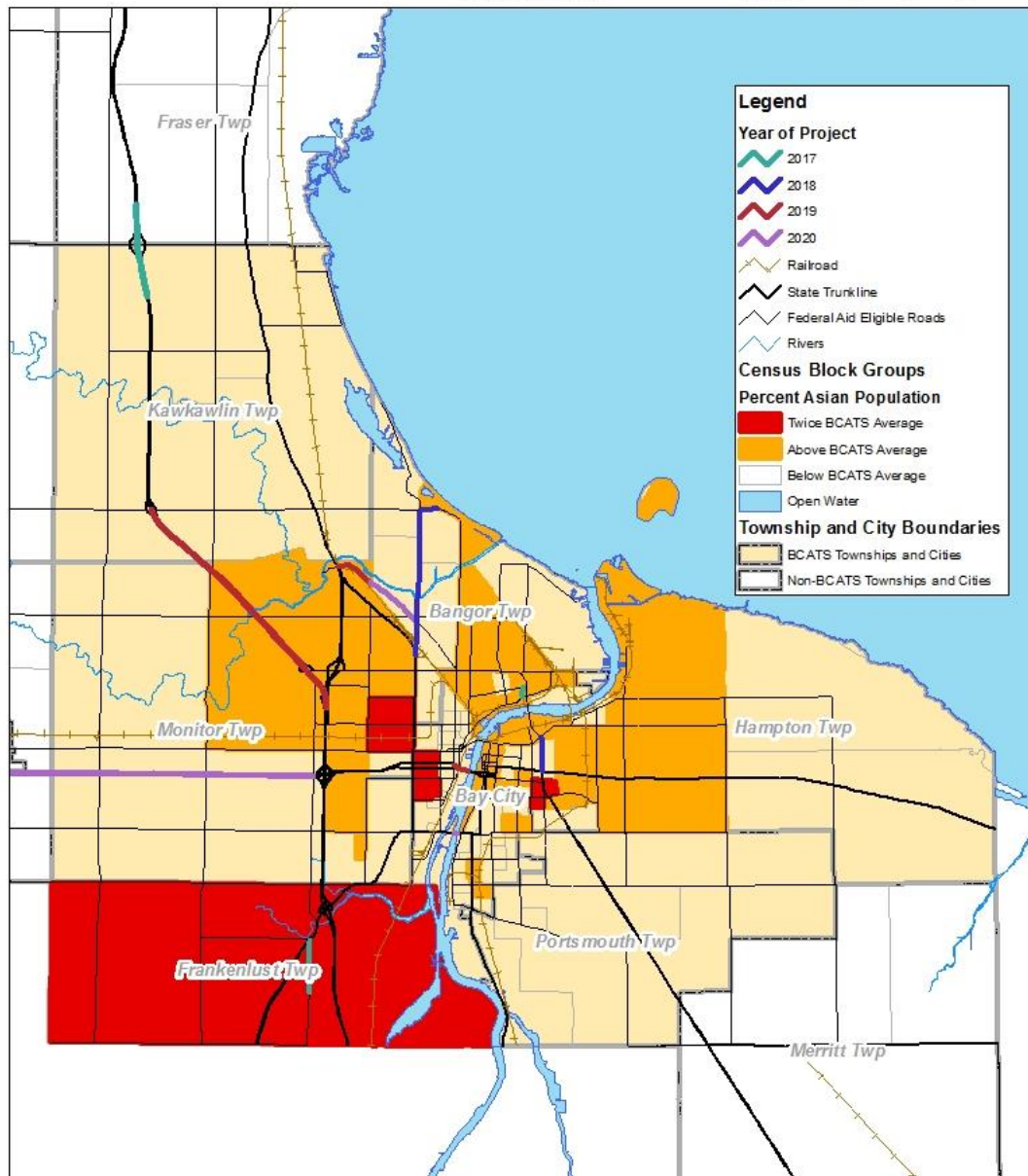
2017-18-19-20 Transportation Improvement Program

Prepared By: County of Bay
Dept. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave.
Bay City, MI 49708
April 2016

Identification of Asian American Minority Areas for
Environmental Justice Analysis
Census Block Groups containing Asian American Populations
above the BCATS Area average of 0.60%
2010 Census Data



0 0.5 1 2 3 4 Miles





Project Overview Map / Hispanic American Minority

Bay City Area Transportation Study (BCATS)

2017-18-19-20 Transportation Improvement Program

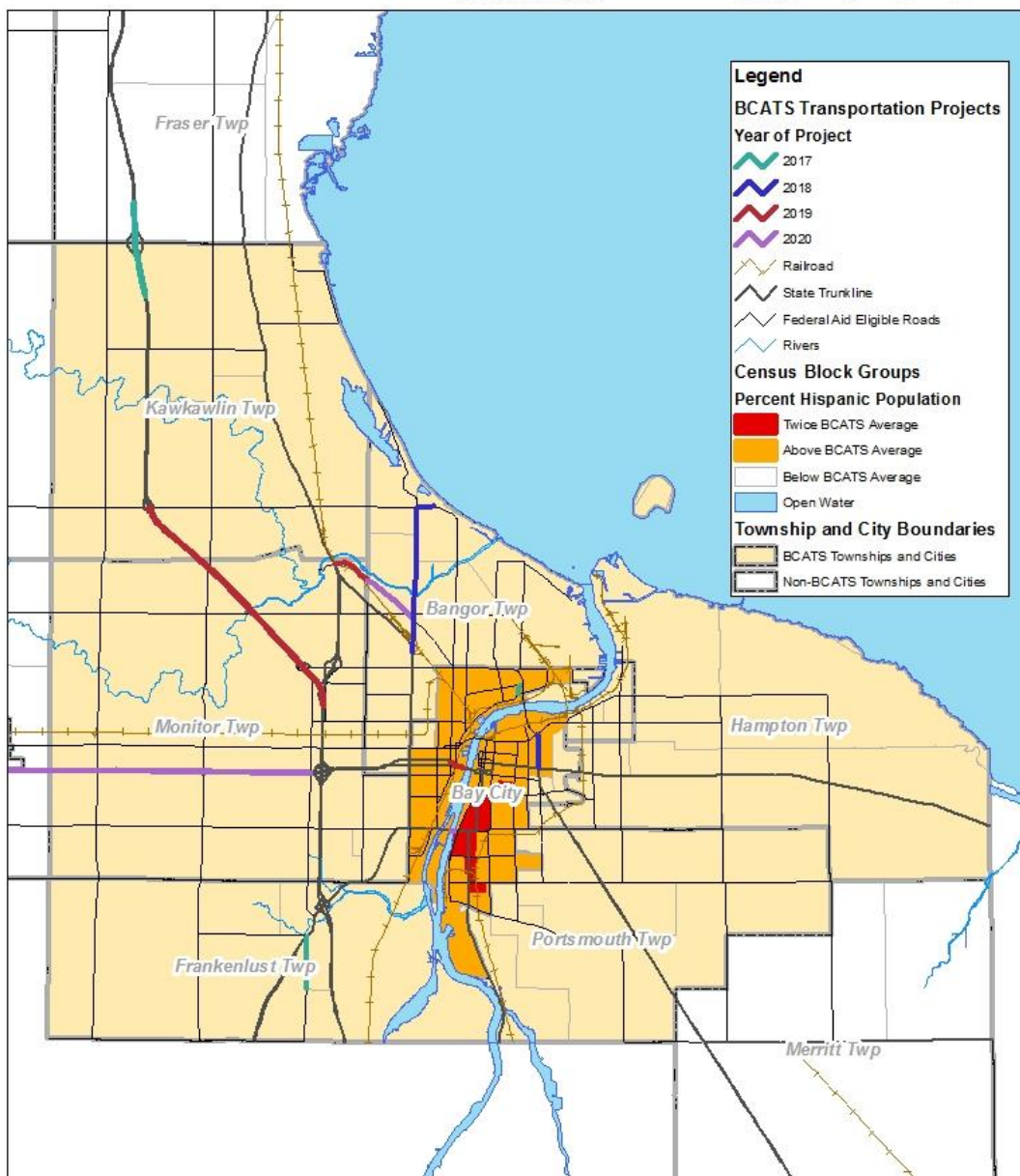
Prepared By: County of Bay
Dept. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave
Bay City, MI 49705

April 2016

Identification of Hispanic American Minority Areas for
Environmental Justice Analysis
Census Block Groups containing Hispanic American Populations
above the BCATS Area average of 5.35%
2010 Census Data



0 0.5 1 2 3 4 Miles





Project Overview Map / Total Low-Income Population

Bay City Area Transportation Study (BCATS)

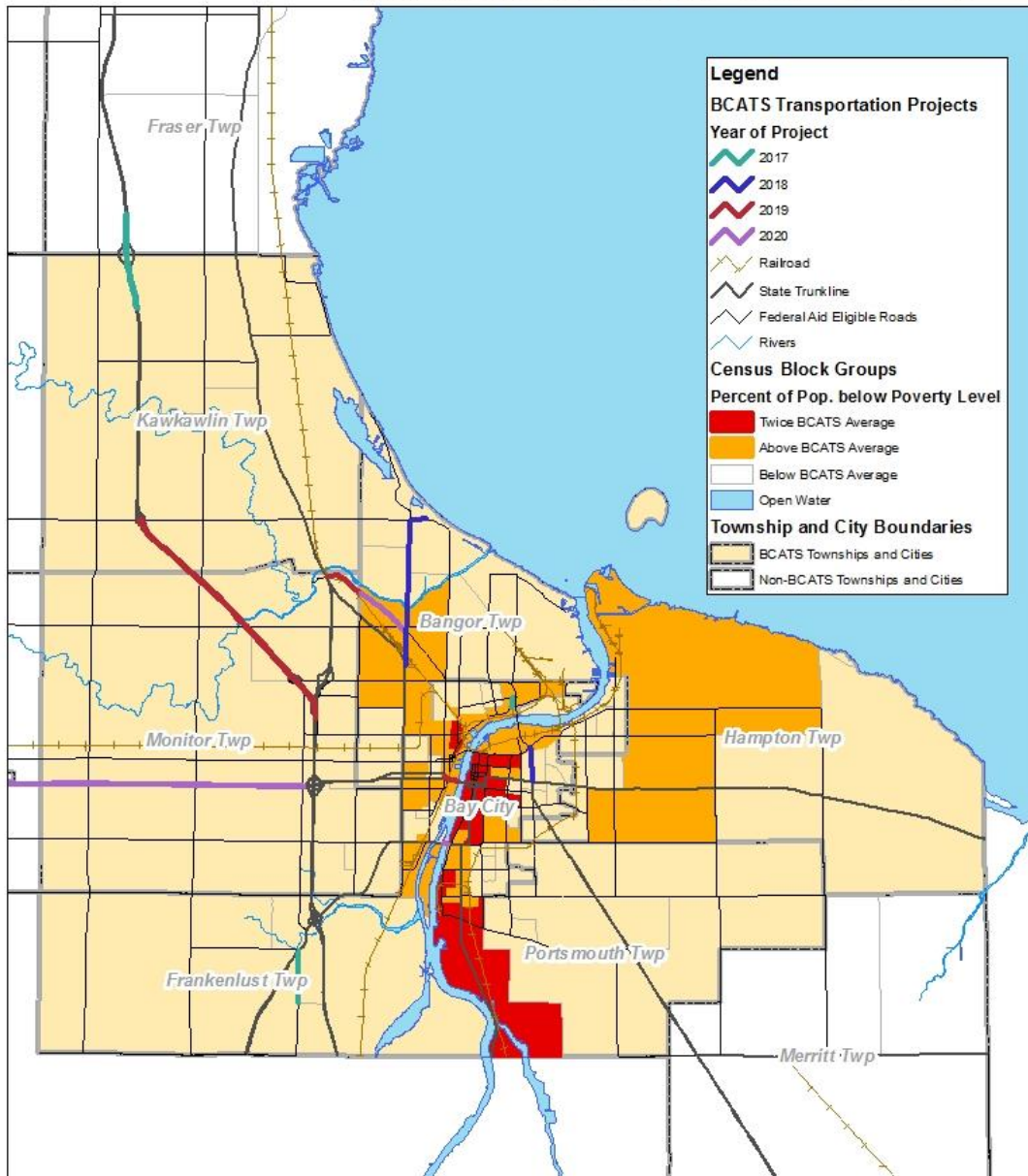
2017-18-19-20 Transportation Improvement Program

Prepared By: County of Bay
Dep. of Environmental Affairs &
Community Development - GIS Program
515 Center Ave.
Bay City, MI 49708
April 2016

Identification of Low Income Population Areas for
Environmental Justice Analysis
Census Block Groups containing Low Income Populations
above the BCATS Area average of 10.29%
2006-2010 American Community Survey Data



0 0.5 1 2 3 4 Miles





Appendix A

Metropolitan Transportation Planning Process Certification

METROPOLITAN TRANSPORTATION PLANNING PROCESS CERTIFICATION (for Attainment Areas)

In accordance with 23 CFR 450.334, the Michigan Department of Transportation and the Bay City Area Transportation Study (BCATS), the Metropolitan Planning Organization for the Bay City, Michigan urbanized area, hereby certify, as part of the STIP submittal, that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

- I. 23 U.S.C. 134, 49 U.S.C. 5303, and 23 CFR 450.334;
- II. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
- III. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
- IV. Section 1101(b) of the SAFETEA-LU (Pub. L. 109-59) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
- V. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- VI. The provisions of the Americans with Disabilities Act of 1990 (42 U.S. C. 12101 *et seq.*) and 49 CFR parts 27, 37, and 38;
- VII. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- VIII. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
- IX. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

James Lillo, Chairman
Bay City Area Transportation Study

David Wresinski, Director
Bureau of Transportation Planning

Date

Date



Consultation Letter

**BAY COUNTY TRANSPORTATION
PLANNING**

515 Center Avenue, Suite 504
Bay City, Michigan 48708

Jay Anderson, BCATS Director
andersonj@baycounty.net

Phone (989) 895-4064
Fax (989) 895-4068
TDD (989) 895-4049
<http://www.baycounty-mi.gov>



TOM HICKNER
County Executive

LAURA OGAR, DIRECTOR
Environmental Affairs &
Community Development

Community Initiatives
Geographic Information Systems
Gypsy Moth Suppression Program
Mosquito Control
Transportation Planning

March 31, 2016

Public Notice
Bay City Area Transportation Study
2017-18-19-20 Transportation Improvement Program (TIP)
Public Comment and Open House

The Bay City Area Transportation Study (BCATS) is seeking public comment on the proposed 2017-18-19-20 Transportation Improvement Program (TIP). The public is encouraged to submit comments to BCATS by any of the following methods: In writing to Jay Anderson, BCATS Director, 515 Center Avenue, Suite 504, Bay City, MI 48708; By phone to 989-895-4064; By fax to 989-895-4068; By email to andersonj@baycounty.net, or: By visiting the BCATS office at the above address. Please submit comments by June 3, 2016.

In addition, an "Open House" to discuss the TIP will be held on Tuesday, May 10, 2016 from 4:00 p.m. to 7:00 p.m. at the Alice and Jack Wirt Public Library, 500 Center Avenue, Bay City, MI 48708.

Copies of the proposed TIP are available for review at the BCATS Office or on the BCATS Website at www.baycounty-mi.gov/transportation.

Pursuant to the Americans with Disabilities Act, individuals with disabilities may request aids/services within a reasonable time period to participate in the meeting. To request aids/services please contact: Amber Davis-Johnson, Corporation Counsel Director, 515 Center Avenue, Bay City, MI 48708. Phone: 989-895-4131/TDD: 989-895-4049 or johnsona@baycounty.net.



Consultation Contact List

Name	Contact Means	Organization	Additional Info
AAA Taxi	Mailing	Transit Operator	
Abed Itani	E-Mailed	Grand Rapids MPO	
Adam Rivard	E-Mailed	MDOT	Bay City TSC
Al Tacey	Mailing	Hampton Township DDA	
Alicia Wallace	E-Mailed	Bay County	EA&CD
Andrew Dodson	E-Mailed	Mlive.com	Bay City Times
Andrew Niedzinski	E-Mailed	Bay City	
Andy Pickard	E-Mailed	FHWA	Michigan Div.
Battle Creek MPO	E-Mailed	Battle Creek MPO	
Bay City CDC	E-Mailed		
Bay County Historical Society	E-Mailed	Historical Society	
Bay County Road Commission	E-Mailed	Bay County Road Commission	general
Bill Shubert	E-Mailed	Riverwalk/Railtrail Committee	
Bob Pawlak	E-Mailed	Portsmouth Township	Supervisor
Brian Mcmanus	E-Mailed	City of Midland	City Engineer
Brian Mulnix	E-Mailed	Musgeon MPO	
Brian Rudolph	E-Mailed	State of Michigan	DEQ
Candace Bales	E-Mailed	City of Bay City DDA	
Cathy Washabaugh	E-Mailed	Riverwalk/Railtrail Committee	
Charles Brunner	E-Mailed	State of Michigan	House
Christopher Izvorski	E-Mailed	Bay County	Emergency Service
Cole Waterman	E-Mailed	Bay City Times	Mlive
Corrigan Moving	Mailing	Freight Company	
Cory Wale	E-Mailed	Bay County Road Commission	
Cynthia Gaul	E-Mailed	Bay County	EA&CD
Dan Darland	E-Mailed	Bangor Township	
Dan Hansford	E-Mailed	Essexville	City Manager
Dan Kildee	Mailing	US Representative	House
Dana Muscott	E-Mailed	Bay City	
Darold Newton	Mailing	NAACP, Bay City Branch	
Darwin Baranski	E-Mailed	Bay City Parks	
Dave Maurer	E-Mailed	News Organization	WSGW
Dave Schabel	E-Mailed	Merritt Township	
Dave Waite	E-Mailed	GLBRT	



David Engelhardt	E-Mailed	EMCOG	
Debbie Stabenow	E-Mailed	US Senate	Senate
Debra Russell	E-Mailed	Bay County	Administrative Services
Dennis Bragiel	E-Mailed	Kawkawlin	
Dennis Kula	E-Mailed	Bangor Township	
Derek Bradsahw	E-Mailed	Flint MPO	
Don Mayle	E-Mailed	MDOT	Modeling
Donald Tilley	E-Mailed	Bay County	Board
Doug Bell	E-Mailed	SMATS	
Doug Dodge	Mailing	James Clements Airport	
Doug Rise	E-Mailed	Bay City Housing Commission	
Doug Wirt	E-Mailed	Freight Company	
Eliza Cortez	E-Mailed	Bay County	Admin.
Ellen Kasper	E-Mailed	Hampton Township	
Eric Sprague	E-Mailed	Bay Metro Transit Authority	
Erik Dziurka	E-Mailed	Bay County Road Commission	
Erik Rodriguez	E-Mailed	Saginaw Chippewa Indian Tribe	
Ernie Krygier	E-Mailed	Bay County	Board
Fabiano Brothers	E-Mailed	Freight Company	
Fish and Wildlife Service	E-Mailed	FWS	
Frank Cloutier	E-Mailed	Saginaw Chippewa Indian Tribe	
FTA - Chicago Office	Mailing	FTA	
Gary Brandt	E-Mailed	Monitor Township	
Gary Peters	Mailing	US Senate	Senate
Gavin McIntyre	E-Mailed	Mlive.com	Bay City Times
George Augustyniak	E-Mailed	Fraser Township	
George Lauinger	E-Mailed	Michigan DNR	
GLBR Hispanic Business Association	Mailing	hispanic community	
Go-To Transport, Inc	Mailing	Freight Company	
Great Lakes Bay Regional CVB	Mailing	CVB	
J & L Transport Inc.	Mailing	Freight Company	
Jack Hofweber	E-Mailed	MDOT	Bay City TSC
Jack Wheatley	E-Mailed	Bay City	
Jan Rise	Mailing	Northeast CDC	
Jay Anderson	E-Mailed	Bay County	EA&CD
Jay Reithel	E-Mailed	MDOT	Region
Jayson Hoppe	E-Mailed	Bay County	Executive's Office
Jeff Anderson	E-Mailed	Bay Metro Transit Authority	



Jeff Mayes	E-Mailed	Consumers	
Jeff Nagel	E-Mailed	MBS	
Jeffrey T. Martin	E-Mailed	GLBRT	
Jim Dubay	E-Mailed	Garfield Township	
Jim Lillo	E-Mailed	Bay County Road Commission	
Joe Ledesma	E-Mailed	Bay City	
John Kelley	E-Mailed	planning consultant	Wade Trim
John Kramer	E-Mailed	Monitor Twp	Fire Chief
John Miller	E-Mailed	Bay County	Sheriff
John Watkin	E-Mailed	State of Michigan	Lansing Planning
Jon Allan	E-Mailed	Michigan DEQ	Great Lakes Office
Jon Start	E-Mailed	Kalamazoo MPO	
Joseph Rivet	E-Mailed	Bay County	Drain
Kathleen Newsham	E-Mailed	Bay City	Mayor
Kathy Leikert	E-Mailed	Riverwalk/Railtrail Committee	
Keith Creagh	E-Mailed	Michigan DNR	
Ken Feldt	E-Mailed	Bay City	Engineering
Ken Lange	E-Mailed	Bangor Township DDA	
Kevin Wassom	E-Mailed	MDOT	Transit
Kim Coonan	E-Mailed	Bay County	Board of Commissioners
Kim Zimmer	E-Mailed	MDOT	Region
Krishina Welch - MDOT	E-Mailed	MDOT	Lansing Planning
Kristen Podnar	E-Mailed	planning consultant	Wade Trim
Kurt Hausbeck	E-Mailed	Bay City	Streets Supervisor
Larry Ramseyer	E-Mailed	Delta	
Laura Anderson	E-Mailed	Bay City Electric Light & Power	
Laura Ogar	E-Mailed	Bay County	EA&CD
Leon Katzinger	Mailing	Northwest CDC	
Linda Petee	E-Mailed	Delta	
Linda Vermeesch	E-Mailed	United Way	
Lindsay Wallace	E-Mailed	St. Clair County Transportation Study	
Lisa Lawrence	E-Mailed	Bangor Township Public Schools	
Lori Ettema	E-Mailed	planning consultant	Spicer
Maja Bolanowska	E-Mailed	Midland MPO	
Marcella Hadden	E-Mailed	Saginaw Chippewa Indian Tribe	
Marilyn Jean Langley	E-Mailed	Thumb Easy Riders Bicycle Group	



Mark Galus	E-Mailed	Fraser Township	
Mark Litten	E-Mailed	Bay Future	
Martin Jurish	E-Mailed	Bay City	
Mary Maupin	E-Mailed	State of Michigan	DEQ Air Quality
Marybeth Laisure	E-Mailed	United Way	
Michael Duranczyk	E-Mailed	Bay County	Board of Commissioners
Michael Kelly	E-Mailed	Saginaw Bay WIN	
Michael Lutz	E-Mailed	Bay County	Board of Commissioners
Michael McBain	E-Mailed	Bay County	EA&CD
Michigan Dept. of Agriculture	Mailing	State of Michigan	Dept. Ag
Michigan Dept. of Community Health	Mailing	State of Michigan	Dept. Community Health
Michigan Eco. Development Corp.	Mailing	State of Michigan	Eco. Dev. Corpoartion
Michigan Historic Preservation Network	E-Mailed	Historic Preservation	
Michigan Sugar Company	Mailing	Freight Company	
Mike Gwizdala	E-Mailed	Bay City Public Schools	
Mike Hayes	E-Mailed	State of Michigan	
Mike Niederquell	E-Mailed	planning consultant	Wade Trim
National Trust for Historic Preservation	Mailing	Historic Preservation	
Pam Boyd	E-Mailed	MDOT	Lansing Planning
Patricia Rayl	E-Mailed	City of Auburn	
Patti Stowell	E-Mailed	Bay City	
Paul Wasek	E-Mailed	Williams Township	
Phil Newton	E-Mailed	Bay City Electric Light & Power	
Philip Grimaldi	E-Mailed	SMATS	
Region VII Area Agency on Aging	Mailing	Region VII Area Agency on Aging	
Richard Byrne	E-Mailed	Pinconning City	
Richard Gromaski	E-Mailed	Bay County Road Commission	Chairman
Richard Hembling	Mailing	Midland Salzburg CDC	
Rick Finn	E-Mailed	Bay City	
Rob Clark	E-Mailed	News Organization	Bay City Times
Rob Eggers	E-Mailed	planning consultant	Spicer
Robert Dion	E-Mailed	Bay City	
Robert Ranck	E-Mailed	MDOT	Region
Robert Redmond	E-Mailed	Bay County	Board
Roger Rosebush	Mailing	City of Essexville DDA	



Ron Bloomfield	E-Mailed	Historical Society	
Ronald Campbell	E-Mailed	Frankenlust Township	
Ryan Buck	E-Mailed	Ann Arbor MPO	
Ryan Carley	E-Mailed	Bay Area Chamber of Commerce	
Ryan Manz	E-Mailed	Bay County	Emergency Management
Ryan McDonnell	E-Mailed	MDOT	Bay City TSC
Sara Dimitroff	E-Mailed	Bay City	Economic Development Division
Scott Bury	E-Mailed	Tri-City Cyclist	
SEMCOG	E-Mailed	SEMCOG	
Sen. Mike Green	E-Mailed	State of Michigan	Senate
Shannon Rodriquez	Mailing	South End CDC	
Sharon Stalsberg	E-Mailed	Pinconning Township	
Short Freight Lines	E-Mailed	Freight Company	
Sita Compton	E-Mailed	Riverwalk/Railtrail Committee	
State Historic Preservation Office	Mailing	State Archaeologist	
Stephen Hocquard	E-Mailed	Saginaw Valley State University	
Steve Bulhuis	E-Mailed	Holland MPO	
Steve Duke	E-Mailed	Jackson MPO	
Steve Skinker	E-Mailed	Lansing MPO	
Stewart McKenzie	E-Mailed	FTA	
Sue Fortune - Executive Director	E-Mailed	EMCOG	
Susan Hedman	Mailing	EPA	
Tammy Roehrs	E-Mailed	Bay County	Division on Aging
Terry Moulthane	E-Mailed	Bay City	
Terry Palmer	E-Mailed	MCRC	
Thomas Herek	E-Mailed	Bay County	Board of Commissioners
Todd Deham	E-Mailed	Bay City Electric Light & Power	
Tom Foret	E-Mailed	Hampton Township	
Tom Hickner	E-Mailed	Bay County	Exec.
Tom Paige	E-Mailed	Bay County	Dept. of Water and Sewer
Tom Putt	E-Mailed	Bay County	EA&CD
Trevor Keyes	E-Mailed	Bay Future	
Tri-City Post No. 31	Mailing	Michigan State Police	
USDA - Michigan State Office	Mailing	USDA	DA
Vaughn Begick	E-Mailed	Bay County	Board of Commissioners



William Bartlett	E-Mailed	Monitor Township DDA	
William Bohlen	E-Mailed	Bay City	DPW
William Kiepert	Mailing	Columbus Avenue	
William Washabaugh	E-Mailed	Freight Company	
William Webber	E-Mailed	Saginaw River Alliance	
Zachary Branigan	E-Mailed	Saginaw Basin Land Conservancy	



Comments Received



Appendix B - Projects, Illustrative List, Fiscal Constraint Tables



Bay City Area Transportation Study – Transportation Improvement Program Projects FY 2017 - 2020

Fiscal Year	County	Respon- sible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Phase Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/ Rural Action Date	Amend- ment Type	Air Quality	Comments	Total Project Cost (\$1000s)
2017	BAY	Bay City	Midland St/Vermont St	Wenona Ave to Dean St	0.16	Restore & rehabilitate	Mill and Resurface	CON	ACC	76	STUL					76	129771	10010			NA	2016: \$91,879 STUL 2017: \$75,612 STUL	417
2017	BAY	Bay City	Patterson Ave	Smith St to Marquette Ave	0.19	Reconstruct	Reconstruction	CON		371	STUL			165	CITY	535	129762	10008			NA		710
2017	BAY	BCRC	3 Mile Rd	M-84 to Amelith	1	Restore & rehabilitate	Crush & Shape	CON		559	STUL			170	CNTY	728	129772	20003			NA		866
2017	BAY	MDOT	I-75	Cottage Grove to 1/2 Mile North of Linwood Rd	1.80	Restore & rehabilitate	Major Rehabilitation	CON		9,720	IM	1,080	M			10,800	116087				NA		11,050
2017	BAY	MDOT	M-13	& M-84 over East Channel Saginaw River	0.21	Bridge replacement	Bridge Replacement	ROW		8	NH	2	M			10	128908				NA		56,902
2017	BAY	MDOT	Trunkline Traffic Operations or Safety	Regionwide		GPA	Trunkline Traffic Operations and Safety			349	ST	39	M			387					NA		387
2017	BAY	MDOT	Trunkline Highway 3R	Regionwide		GPA	Trunkline Highway 3R					34	M			34					NA		34
2018	BAY	Bay City	Trumbull St	M-25 to Woodside Ave	0.63	Reconstruct	Full Reconstruction	CON	AC	1,025	STUL			523	CITY	1,548	130094				NA	2018: \$1,024,988 STUL 2019: 213,412 STUL	1,672
2018	BAY	MDOT	I-75	Beaver Rd to Cottage Grove Rd	3.60	Restore & rehabilitate	Concrete Overlay or Rubblize/HMA	PE		683	IM	76	M			759	128585				NA		17,038
2018	BAY	MDOT	Trunkline Traffic Operations or Safety	Regionwide		GPA	Trunkline Traffic Operations and Safety			122	ST	14	M			135					NA		135
2018	BAY	MDOT	Trunkline Highway 3R	Regionwide		GPA	Trunkline Highway 3R					724	M			724					NA		724
2019	BAY	Bay City	Trumbull St	M-25 to Woodside Ave	0.63	Reconstruct	Full Reconstruction	CON	ACC	213	STUL					213	130094				NA	2018: \$1,024,988 STUL 2019: 213,412 STUL	1,672



Bay City Area Transportation Study – Transportation Improvement Program Projects FY 2017 - 2020																							
Fiscal Year	County	Respon- sible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Phase Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/ Rural Action Date	Amend-ment Type	Air Quality	Comments	Total Project Cost (\$1000s)
2019	BAY	BCRC	Old Kawkawlin Rd	M-13 to 2 Mile Rd	0.73	Restore & rehabilitate	Mill, resurface, drainage, signage	CON		832	STUL			492	CNTY	1,324	130312				NA		1,324
2019	BAY	MDOT	I-75	8 bridges in Bay County	2.40	Bridge restore & rehabilitate	Deep Overlay	CON		7,858	IM	873	M			8,731	126812				NA		8,764
2019	BAY	MDOT	I-75	3 bridges in Bay County	1.69	Bridge replacement	Deck Replacement	CON		6,974	IM	775	M			7,749	126813				NA		7,799
2019	BAY	MDOT	I-75	M-13 Connector to Beaver Road	5.33	Restore & rehabilitate	Unbonded Concrete Overlay or Rubblize/HMA	CON		19,412	IM	2,157	M			21,569	123642				NA		21,569
2019	BAY	MDOT	Trunkline Traffic Operations or Safety	Regionwide		GPA	Trunkline Traffic Operations and Safety			275	ST	31	M			305					NA		305
2020	BAY	BCRC	Old Kawkawlin Rd	2 Mile Rd to M-247	1.15	Restore & rehabilitate	Mill, Rehab, Resurface, Drainage, Signage	CON		1,066	STUL			778	CNTY	1,845	130309				NA		1,845
2020	BAY	MDOT	M-13	& M-84 over East Channel Saginaw River	0.21	Bridge - other	Bridge Replacement	CON		40,878	NH	8,282	M			49,160	128908				NA		56,902
2020	BAY	MDOT	Trunkline Traffic Operations or Safety	Regionwide		GPA	Trunkline Traffic Operations and Safety			2,813	ST	313	M			3,125					NA		3,125



Bay City Area Transportation Study – GPA Projects

Fiscal Year	County	Respon- sible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Phase Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/ Rural Action Date	Amend- ment Type	Air Quality	Comments	Total Project Cost (\$1000s)
2017	BAY	MDOT	M-25 WB	M-25 WB	0.24	Traffic ops/safety	Pavement Grooving for High Friction Surface	PE		93	HSIP	10	M			103	123963				NA		409
2017	BAY	MDOT	US-10 - WB	US-10 from Flajole Road to I-75	9.94	Traffic ops/safety	Median Guardrail, Type TD	PE		256	HSIP	28	M			284	127506				NA		3,409
2017	BAY	MDOT	M-247	M-13 to Bay City State Park	3.036	Resurface	HMA overlay	PE				34	M			34	130059				NA		759
2018	BAY	MDOT	M-247	M-13 to Bay City State Park	3.036	Resurface	HMA overlay	CON				724	M			724	130059				NA		759
2018	BAY	MDOT	M-13	Beaver Rd		Traffic ops/safety	Signal Modernization & Geometric Improvements	PE		122	HSIP	14	M			135	129229				NA		475
2019	BAY	MDOT	M-25 WB	M-25 WB	0.24	Traffic ops/safety	Pavement Grooving for High Friction Surface	CON		275	HSIP	31	M			305	123963				NA		409
2020	BAY	MDOT	US-10	US-10 from Flajole Road to I-75	9.94	Traffic ops/safety	Median Guardrail, Type TD	CON		2,813	HSIP	313	M			3,125	127506				NA		3,409



Bay City Area Transportation Study - Illustrative Projects

Fiscal Year	County	Responsible Agency	Project Name	Limits	Project Description	Phase	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Cost (\$1000s)	Local ID No.	Total Project Cost (\$1000s)
	BAY	BCRC	Old Kawkawlin Rd	M-247 to State Park Drive	Cold-mill, repair existing concrete joints, resurface with HMA, drainage improvements, interesection improvements, new permanent pavement markings and signage	CON	650	STUL			973	CNTY	1,623		1,623
	BAY	BCRC	Patterson Rd	Wilder Rd to Wheeler Rd	Remove the existing HMA surface, repair existing concrete joints, resurface with HMA, drainage improvements, interesection improvements, new permanent pavement markings and signage	CON	800	STUL			1,018	CNTY	1,818		1,818
	BAY	Bay City	Wenona Ave	Ionia St to M-25	Reconstruction	CON	1,350	STUL			372	CITY	1,860		1,860
	BAY	Bay City	Marquette Ave	Hart St to Transit St	Reconstruction	CON	1,323	STUL			364	CITY	1,822		1,822



FTA Candidate Projects

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/Rural Approval Date	Amendment Type	Air Quality	Comments	Total Project Cost (\$1000s)
2017	BAY	BMTA	Operating assistance	County-wide		Transit operations	Operating assistance	T-Ops		2,135	5307	2,653	CTF	2,891	TRAL	7,680				Cost	NA	\$1,335,740 Sec5307 \$742,868 Sec5311 \$56,816 Sec 5303	7,680
2017	BAY	BMTA	(3) Van-mounted security camera equipment	County-wide		Transit operations equipment	Add (3) van-mounted security camera equipment	T-Cap		10	5307	3	CTF			13				Cost	NA	Sec. 5307 Security project	13
2017	BAY	BMTA	Facility security cameras	County-wide		Transit facility	Add facility security cameras	T-Cap		3	5307	1	CTF			4				Cost	NA	Sec. 5307 Security project	4
2017	BAY	BMTA	Replace (2) lift vans	County-wide		Transit vehicle additions/replacements	Replace (2) lift vans	T-Cap		80	5339	20	CTF			100				Cost	NA	Sec.5339 Bus and Bus Facility	100
2017	BAY	BMTA	Replace operations support vehicle	County-wide		Transit operations equipment	Replace operations support vehicle	T-Cap		47	5339	12	CTF			59				Cost	NA	Sec.5339 Bus and Bus Facility	59
2018	BAY	BMTA	Operating assistance	County-wide		Transit operations	Operating assistance	T-Ops		2,135	5307	2,653	CTF	2,891	TRAL	7,680					NA	\$1,335,740 Sec5307 \$742,868 Sec5311 \$56,816 Sec 5303	7,680
2018	BAY	BMTA	Upgrade security hardware/software	County-wide		Transit facility	Upgrade security hardware/software	T-Cap		13	5307	3	CTF			17					NA	Sec. 5307 Security project	17
2018	BAY	BMTA	Facility phone system replacement	County-wide		Transit facility	Facility phone system replacement	T-Cap		40	5339	10	CTF			50					NA	Sec.5339 Bus and Bus Facility	50
2018	BAY	BMTA	Concrete drive replacement	County-wide		Transit facility	Concrete drive replacement	T-Cap		45	5339	11	CTF			57					NA	Sec.5339 Bus and Bus Facility	57
2018	BAY	BMTA	Vehicle storage facility push-type floor scrubber	County-wide		Transit operations equipment	Replace vehicle storage facility floor scrubber	T-Cap		12	5339	3	CTF			15					NA	Sec.5339 Bus and Bus Facility	15



FTA Candidate Projects

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/Rural Approval Date	Amendment Type	Air Quality	Comments	Total Project Cost (\$1000s)
2018	BAY	BMTA	Operations and facility support utility vehicle	County-wide		Transit operations equipment	Add operations and facility support utility vehicle	T-Cap		16	5339	4	CTF			20					NA	Sec.5339 Bus and Bus Facility	20
2018	BAY	BMTA	Replace (14) fareboxes	County-wide		Transit operations equipment	Replace (14) fareboxes	T-Cap		14	5339	4	CTF			18					NA	Sec.5339 Bus and Bus Facility	18
2019	BAY	BMTA	Operating assistance	County-wide		Transit operations	Operating assistance	T-Ops		2,135	5307	2,653	CTF	2,891	TRAL	7,680					NA	\$1,335,740 Sec5307 \$742,868 Sec5311 \$56,816 Sec 5303	7,680
2019	BAY	BMTA	Administrative office window replacement	County-wide		Transit facility	Administrative office window replacement	T-Cap		20	5339	5	CTF			25					NA	Sec.5339 Bus and Bus Facility	25
2019	BAY	BMTA	Maintenance facility lubrication system replacement	County-wide		Transit facility	Maintenance facility lubrication system replacement	T-Cap		40	5339	10	CTF			50					NA	Sec.5339 Bus and Bus Facility	50
2019	BAY	BMTA	Concrete drive replacement	County-wide		Transit facility	Concrete drive replacement	T-Cap		67	5339	17	CTF			84					NA	Sec.5339 Bus and Bus Facility	84
2020	BAY	BMTA	Operating assistance	County-wide		Transit operations	Operating assistance	T-Ops		2,135	5307	2,653	CTF	2,891	TRAL	7,680					NA	\$1,335,740 Sec5307 \$742,868 Sec5311 \$56,816 Sec 5303	7,680
2020	BAY	BMTA	Replace riding-type floor scrubber	County-wide		Transit operations equipment	Replace riding-type floor scrubber	T-Cap		36	5339	9	CTF			45					NA	Sec.5339 Bus and Bus Facility	45



FTA Candidate Projects

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/Rural Approval Date	Amendment Type	Air Quality	Comments	Total Project Cost (\$1000s)
2020	BAY	BMTA	Replace (2) lift vans	County-wide		Transit operations	Replace (2) lift vans	T-Cap		91	5339	23	CTF			114					NA	Sec.5339 Bus and Bus Facility	114
	BAY	BMTA	Installation of solar panels	County-Wide		Transit facility	Installation of solar panels at main facility	T-Cap		800	5339	200	CTF			1,000		30005			NA		600
	BAY	BMTA	Replace bus wash unit to inc. water recovery system	County-Wide		Transit facility	Replace bus wash unit to inc. water recovery system	T-Cap		480	5339	120	CTF			600		30013			NA		600
	BAY	BMTA	Replace (16) 1996-2000 medium buses	County-wide		Transit vehicle additions/replacements	Replace (16) 1996-2000 medium buses	T-Cap		5,120	5339	1,280	CTF			6,400		30019			NA		6,400
	BAY	BMTA	Replace maintenance facility air make-up unit	County-wide		Transit facility	Replace maintenance facility air make-up unit	T-Cap		224	5339	56	CTF			280					NA		280
	BAY	BMTA	Replace fare collection system	County-wide		Transit facility	Replace fare collection system	T-Cap		800	5339	200	CTF			1,000					NA		1,000
	BAY	BMTA	Main facility energy efficiency upgrades	County-wide		Transit facility	Main facility energy efficiency upgrades	T-Cap		80	5339	20	CTF			100					NA		100
	BAY	BMTA	Upgrade Computer hardware/software	County-wide		Transit operations equipment	Upgrade computer hardware/software	T-Cap		16	5339	4	CTF			20					NA		20
	BAY	BMTA	Main facility fiber optic cable installation	County-wide		Transit facility	Main Facility fiber optic cable installation	T-Cap		24	5339	6	CTF			30					NA		30
	BAY	BMTA	Administrative Facility Upgrades	County-wide		Transit facility	Administrative Facility Upgrades	T-Cap		800	5339	200	CTF			1,000					NA		1,000
	BAY	BMTA	Upgrade Telecommunications system	County-wide		Transit facility	Upgrade Telecommunications system	T-Cap		24	5339	6	CTF			30					NA		30



FTA Candidate Projects

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost (\$1000s)	Federal Fund Source	State Cost (\$1000s)	State Fund Source	Local Cost (\$1000s)	Local Fund Source	Total Cost (\$1000s)	MDOT Job No.	Local ID No.	MPO/Rural Approval Date	Amendment Type	Air Quality	Comments	Total Project Cost (\$1000s)
	BAY	BMTA	Replace Time Clock System	County-wide		Transit operations equipment	Replace Time Clock System	T-Cap		32	5339	8	CTF			40					NA		40
	BAY	BMTA	Replace GPS System	County-wide		Transit operations equipment	Replace GPS System	T-Cap		64	5339	16	CTF			80					NA		80
	BAY	BMTA	Replace Vehicle Pressure Washer	County-wide		Transit operations equipment	Replace Vehicle Pressure Washer	T-Cap		16	5339	4	CTF			20					NA		20
2021	BAY	BMTA	Operating assistance	County-wide		Transit operations	Operating assistance	T-Ops		2,135	5307	2,653	CTF	2,891	TRAL	7,680				Cost	NA	\$1,335,740 Sec5307 \$742,868 Sec5311 \$56,816 Sec 5303	7,680
2021	BAY	BMTA	Concrete drive replacement	County-wide		Transit facility	Concrete drive replacement	T-Cap		36	5339	9	CTF			45				Cost	NA	Sec.5339 Bus and Bus Facility	45
2021	BAY	BMTA	Replace (2) lift vans	County-wide		Transit operations	Replace (2) lift vans	T-Cap		91	5339	23	CTF			114				Cost	NA	Sec.5339 Bus and Bus Facility	114



Financial Constraint Table

	2017				2018				2019				2020			
Highway Program	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s
MDOT AC & M Program		\$34,494	\$34,494	\$34,494		\$724,372	\$724,372	\$724,372			\$0	\$0			\$0	\$0
MDOT FA Program	\$10,076,910	\$1,120,562	\$11,197,472	\$11,197,472	\$804,652	\$89,406	\$894,058	\$894,058	\$34,518,551	\$3,835,393	\$38,353,944	\$38,353,944	\$43,691,094	\$8,594,176	\$52,285,270	\$52,285,270
Sub-Total MDOT	\$10,076,910	\$1,155,056	\$11,231,966	\$11,231,966	\$804,652	\$813,778	\$1,618,430	\$1,618,430	\$34,518,551	\$3,835,393	\$38,353,944	\$38,353,944	\$43,691,094	\$8,594,176	\$52,285,270	\$52,285,270
Local STP	\$1,004,890	\$334,226	\$1,339,116	\$1,339,116	\$1,024,988		\$1,024,988	\$1,024,988	\$1,045,487	\$492,225	\$1,537,712	\$1,537,712	\$1,066,397	\$778,403	\$1,844,800	\$1,844,800
Local Bridge			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Local CMAQ			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Local Safety			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Local Equity Bonus (TEDF)			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Local Other FHWA			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Local AC Starts			\$0	\$0		\$523,012	\$523,012	\$523,012			\$0	\$0			\$0	\$0
Local Non-Federal			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Sub-Total Local	\$1,004,890	\$334,226	\$1,339,116	\$1,339,116	\$1,024,988	\$523,012	\$1,548,000	\$1,548,000	\$1,045,487	\$492,225	\$1,537,712	\$1,537,712	\$1,066,397	\$778,403	\$1,844,800	\$1,844,800
Total Highway	\$11,081,800	\$1,489,282	\$12,571,082	\$12,571,082	\$1,829,640	\$1,336,790	\$3,166,430	\$3,166,430	\$35,564,038	\$4,327,618	\$39,891,656	\$39,891,656	\$44,757,491	\$9,372,579	\$54,130,070	\$54,130,070
Transit Fund Source	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitment s
CTF - Comprehensive Transit Fund			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 3038 - Over the Road Bus Program			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 3045 - National Fuel Cell Technology Development Program			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5303 - Metropolitan Transportation Planning			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5304 - Statewide Transportation Planning			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5305 - Metropolitan and Statewide Planning			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5307 - UZA Formula	\$0		\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5308 - Clean Fuels Program			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5309 - Capital Bus and Capital New Starts			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5310 - Elderly & Disabled			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5311 - Non-UZA			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5312 - Research, Development, Demonstration, and Deployment			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0



Section 5313 - Transit Cooperative Research Program			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5314 - National Research and Technology Program			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5316 - Job Access/Reverse Commute			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5317 - New Freedom Initiative			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5320 - Alternative Transportation in Parks and Public Lands			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5322 - Human Resources and Training			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5324 - Emergency Relief			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5326 - Asset Management Provisions			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5329 - Safety			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5337 - State of Good Repair Grants			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5339 - Bus and Bus Facilities	\$0		\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Section 5505 - University Transportation Centers Program			\$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0
Total Transit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grand Total	\$11,081,800	\$1,489,282	\$12,571,082	\$12,571,082	\$1,829,640	\$1,336,790	\$3,166,430	\$3,166,430	\$35,564,038	\$4,327,618	\$39,891,656	\$39,891,656	\$44,757,491	\$9,372,579	\$54,130,070	\$54,130,070



Appendix C - List of Available Federal-Aid Highway and Transit Resources²

Highway Resources

Source	Purpose	Examples of Eligible Activities
Surface Transportation Block Grant Program	Maintain and improve the federal-aid highway system.	Construction, reconstruction, or rehabilitation of highways, bridges, and tunnels; transit capital projects, infrastructure-based intelligent transportation systems (ITS) capital improvements; border infrastructure; highway and transit safety projects; traffic monitoring, management, and control facilities; non-motorized projects (including projects eligible under the former Transportation Alternatives Program); and bridge scour countermeasures.
Highway Safety Improvement Program (HSIP)	Decrease highway deaths and injuries.	Intersection safety improvements; pavement and shoulder widening; rumble strips or other warning device; improvements for pedestrian or bicyclist safety or safety of persons with disabilities; Construction and improvement of a railway-highway grade crossing safety feature, including installation of protective devices; traffic calming features; elimination of a roadside hazard; and installation, replacement, and other improvement of highway signage and pavement markings, or a project to maintain minimum levels of retro-reflectivity, that addresses a highway safety problem consistent with a State Strategic Highway Safety Plan; roadside safety audits.
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Reduce emissions from transportation sources.	Installing dedicated turn lanes; signal retiming, interconnection, or actuation; constructing roundabouts; diesel retrofits; projects to reduce single-occupant vehicle travel; new or reduced-headways transit routes. However, since Bay County is in attainment for Ozone under USEPA's recently implemented 8-hour Ozone Standard, BCATS is not eligible for CMAQ funds.
National Highway Performance Program (NHPP)	Maintain and improve the National Highway System (NHS) (i.e., the subset of the federal-aid highway system that includes roads classified as principal arterials or above).	Construction, rehabilitation, or reconstruction of highways, bridges, and tunnels; transit capital projects on the NHS; infrastructure-based intelligent transportation systems (ITS) capital improvements on the NHS; highway and transit safety projects on the NHS; certain bicycle and non-motorized activities; and construction, rehabilitation, or reconstruction of highways, bridges, and tunnels on federal-aid highways not on the NHS, as long as they are within the same corridor as a segment of the NHS.

² Not intended to be an exhaustive list of all eligible activities.



Transit Resources

Source	Purpose	Examples of Eligible Activities
Sec. 5307 Urbanized Area Formula Grants	Funding for basic transit capital needs of transit agencies in urbanized areas.	Capital projects, transit planning, and projects eligible under the former Job Access Reverse Commute (JARC) program (intended to link people without transportation to available jobs). Some of the funds can also be used for operating expenses, depending on the size of the transit agency. One percent of funds received are to be used by the agency to improve security at agency facilities.
Section 5310, Elderly and Persons with Disabilities	Improving mobility options for seniors and disabled persons.	Projects to benefit seniors and disabled persons when service is unavailable or insufficient and transit access projects for disabled persons exceeding Americans with Disabilities Act (ADA) requirements. Section 5310 incorporates the former New Freedom program.
Section 5311, Non- Urbanized Area Formula Grants	Improving mobility options for residents of rural areas.	Capital, operating, and rural transit planning activities in areas under 50,000 population.
Section 5337, State of Good Repair Grants	Maintaining fixed-guideway transit systems in a state of good repair.	Capital, maintenance, and operational support projects. Recipients develop and implement an asset management plan. Half of Section 5337 funding is distributed by a formula accounting for vehicle revenue miles and directional route miles; half is based on ratios of past funding received.
Section 5339, Bus and Bus Facilities	Funding for basic transit capital needs of transit agencies, including construction of bus-related facilities.	Replace, rehabilitate, and purchase buses and related equipment, and construct bus-related facilities.



Appendix D - Financial and Operations and Maintenance Assumptions

Funding Growth Rates

These rates are not Year of Expenditure (i.e., inflation). Funding growth rates are the forecast of what is expected to be apportioned and/or allocated to the state and the MPOs. These funds are not indexed for inflation: There is no “cost of living” adjustment. Assumptions are made based on information known at a given point in time. What we know as we develop our current estimates is:

1. Michigan has seen very little growth in its federal-aid highway apportionment over the past couple of decades. Over the past 18 fiscal years, the state’s apportionment has only increased, on average 2.47 percent per year. In recent years the average annual change in apportionment has actually been negative, with the ten-year average at -0.30 percent and the five-year average at -1.21 percent.
2. On December 4, 2015, the FAST Act was signed into law. The FAST Act authorizes \$305 billion in federal funding for the nation’s surface transportation system over the next five years. The legislation breaks the cycle of short-term funding authorizations that have characterized the federal program for the past 10 years and, in covering nearly five full fiscal years, represents the longest surface transportation authorization bill enacted since 1998.
3. Reliance on non-transportation revenue to support investments in surface transportation is continued in the FAST Act. The FAST Act transfers \$70 billion from the federal General Fund into the federal HTF to ensure that all investments in highways and transit during the next five fiscal years are fully paid for. This brings the total amount of non-transportation revenue that has supported investments from the HTF during the past seven years to nearly \$145 billion.

Although the FAST Act has increased funding stability over the next five fiscal years, funding increases are modest at best. In keeping the modest increases outlined in the FAST Act, MDOT is recommending two percent per year funding increases between FY 2017 and FY 2020.

Year of Expenditure (YOE) Rates

These rates represent the forecast of how much the cost of implementing transportation projects will increase each year, on average. In other words, YOE is the expected inflation rate in the transportation agencies’ cost of doing business. YOE adjustments to project costs are essential to show the true relationship between costs and resources. In recent years, highway and transit agencies have been increasingly squeezed by this phenomenon, since the inflation rate on transportation costs have increased essentially around 2.47 percent, the inflation rate means that less work can be done per allocated dollar. When viewed from the point of view of purchasing power, the states and MPOs have experienced a sharp decline in funding resources.

Based on past experience, MDOT, in cooperation with MTPA, will use the following YOE factors:

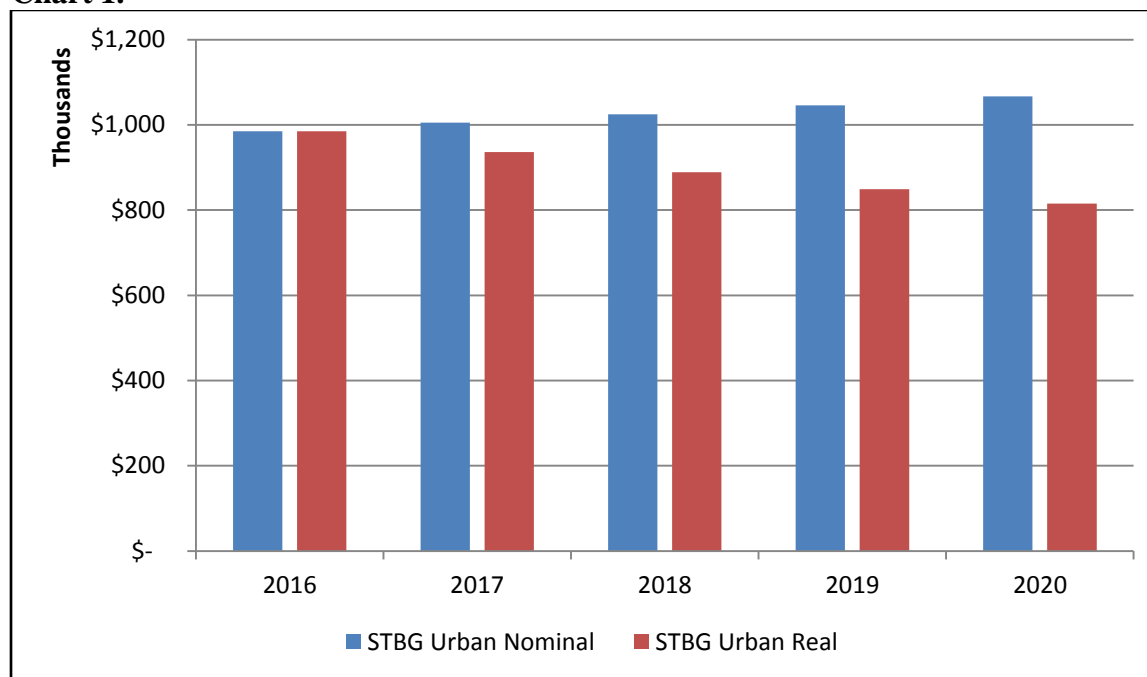
1. 2016, base year;



2. 2017, five percent above 2016;
3. 2018, five percent above 2017;
4. 2019, 4.5 percent above 2018; and
5. 2020, four percent above 2019.

Chart 1 is an example that illustrates the difference between what we will officially receive in STPBG Urban funding over the life of the FAST Act (i.e., nominal funding), and what that funding will be worth relative to the purchasing power of the base year (i.e., real funding).

Chart 1.



Estimate of Operations and Maintenance (O and M) Costs on the Federal-Aid Highway System

Repair and improvements to capital assets are only part of the total cost of the federal-aid highway system. Operations and maintenance (O and M), defined as those items (other than repair/replacement of capital assets) necessary to keep the highway infrastructure functional for vehicle travel, is just as important. Federal-aid funds cannot be used for O and M, which covers activities like grass cutting, trash removal, and snow removal. However, federal transportation planning regulations require an estimate of those costs on the federal-aid highway system.

The O and M estimate was derived in the following manner:

1. MDOT's estimate of total O and M funding available for the state trunkline system throughout Michigan is approximately \$599 million annually.
2. The total lane miles for the entire state trunkline system is determined and used as the denominator in the fraction $\$599 \text{ million} / \text{Total State Trunkline Lane Miles}$ to determine a per-lane-mile cost.



3. Approximately 1.0 percent of the lane miles in the state trunkline system are located in the BCATS Planning Area.
4. Assuming a roughly equal per-lane-mile operations and maintenance cost throughout the state trunkline system, MDOT should spend approximately \$ 5.3 million annually in the BCATS Planning Area on these activities.
5. The per-lane-mile cost will also be applied to locally-owned roads on the federal-aid-highway system.
6. The sum of costs from Steps 4 and 5 will constitute the required O and M estimate.
7. This base estimate is adjusted according to the inflation factors noted above in each fiscal year, since this is the *cost* of O and M, not a particular funding *source*.